“Decentralised Renewable Energy Innovations to Boost Agri-Sector Productivity and Address Global Food System Challenges ”

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Credit: Gham Power

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About ARE

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The Alliance for Rural Electrification (ARE) is the global association for the decentralised renewable energy (DRE) industry, catalysing private sector-driven markets for sustainable electricity services, creating jobs and powering equitable green economies.

#1
Global decentralised renewable energy association

185+
Members

50+
Countries

3
Continents

ARE Members

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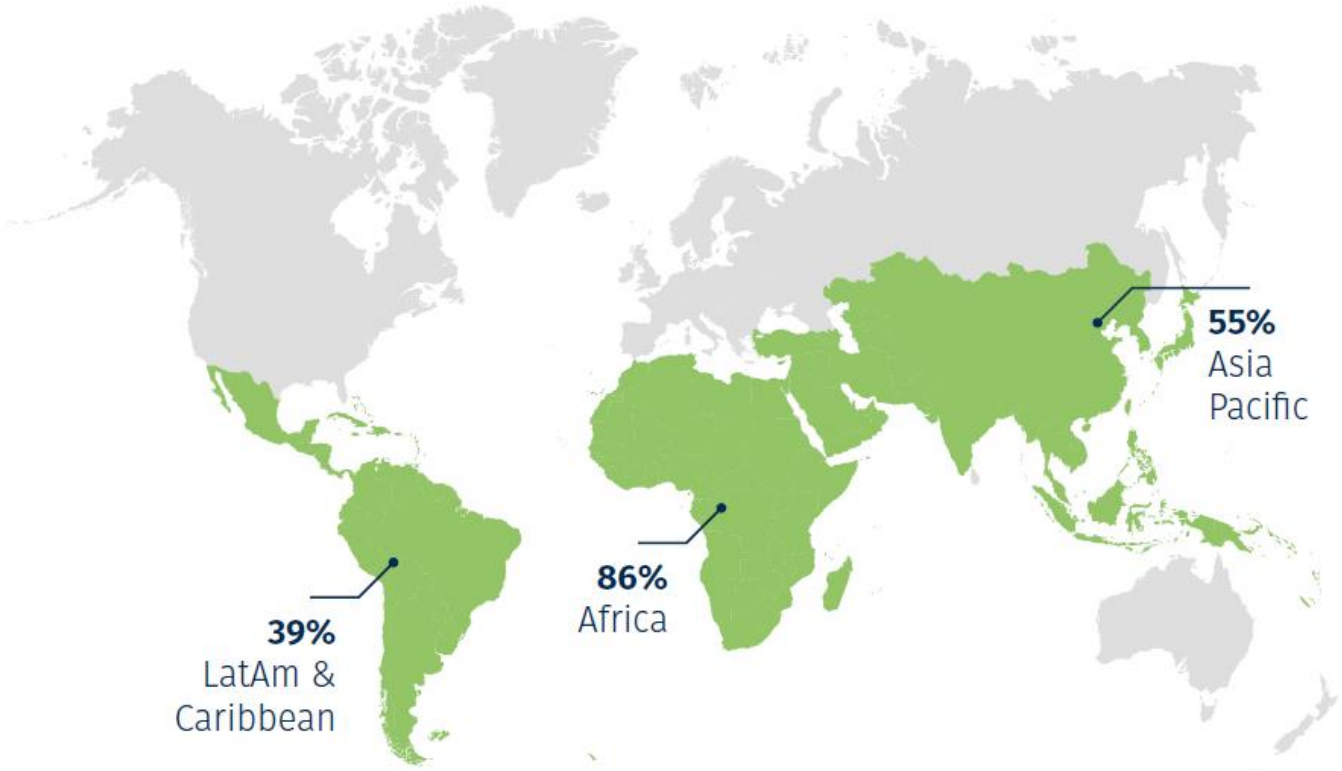
ARE Members' Regional Focus



Technologies

23%	25%	27%	42%	67%	79%
Bioenergy	Hydro	Wind	Power Components	Energy Storage	PV

Systems

75%	87%
Standalone	Mini-grid

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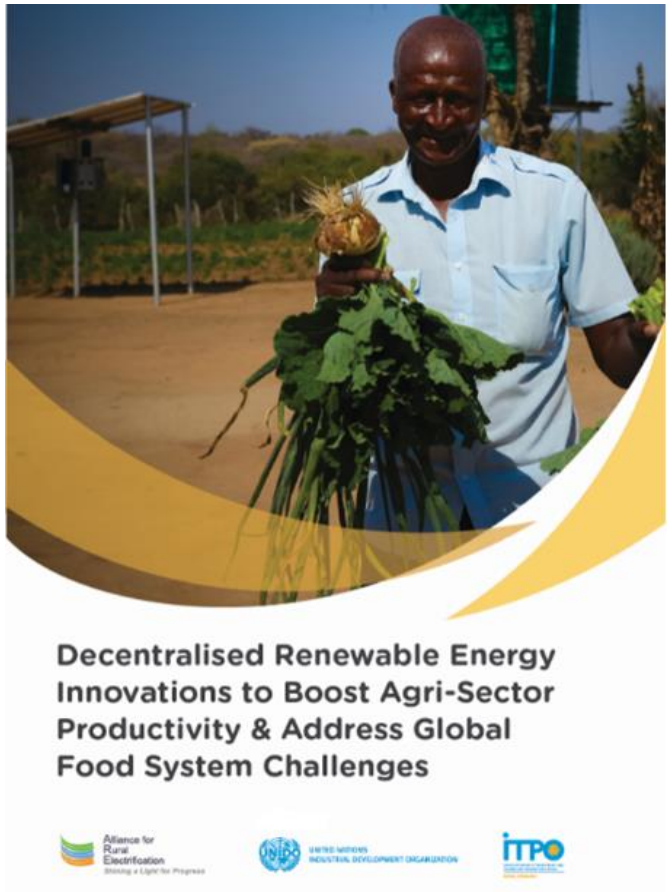
Objective of the publication

The campaign is a joint effort by UNIDO ITPO Germany and ARE.

Highlighting key innovations and lessons learnt from around the world, especially from emerging markets, that sustainably increase productivity in the agricultural sector using DRE technologies and thus help solve global challenges in food systems.

Target audiences:

- International funding partners and philanthropies
- Governments
- Private sector
- Civil Society Organisations (CSOs)
- Local communities



[Download the publication]

Case studies

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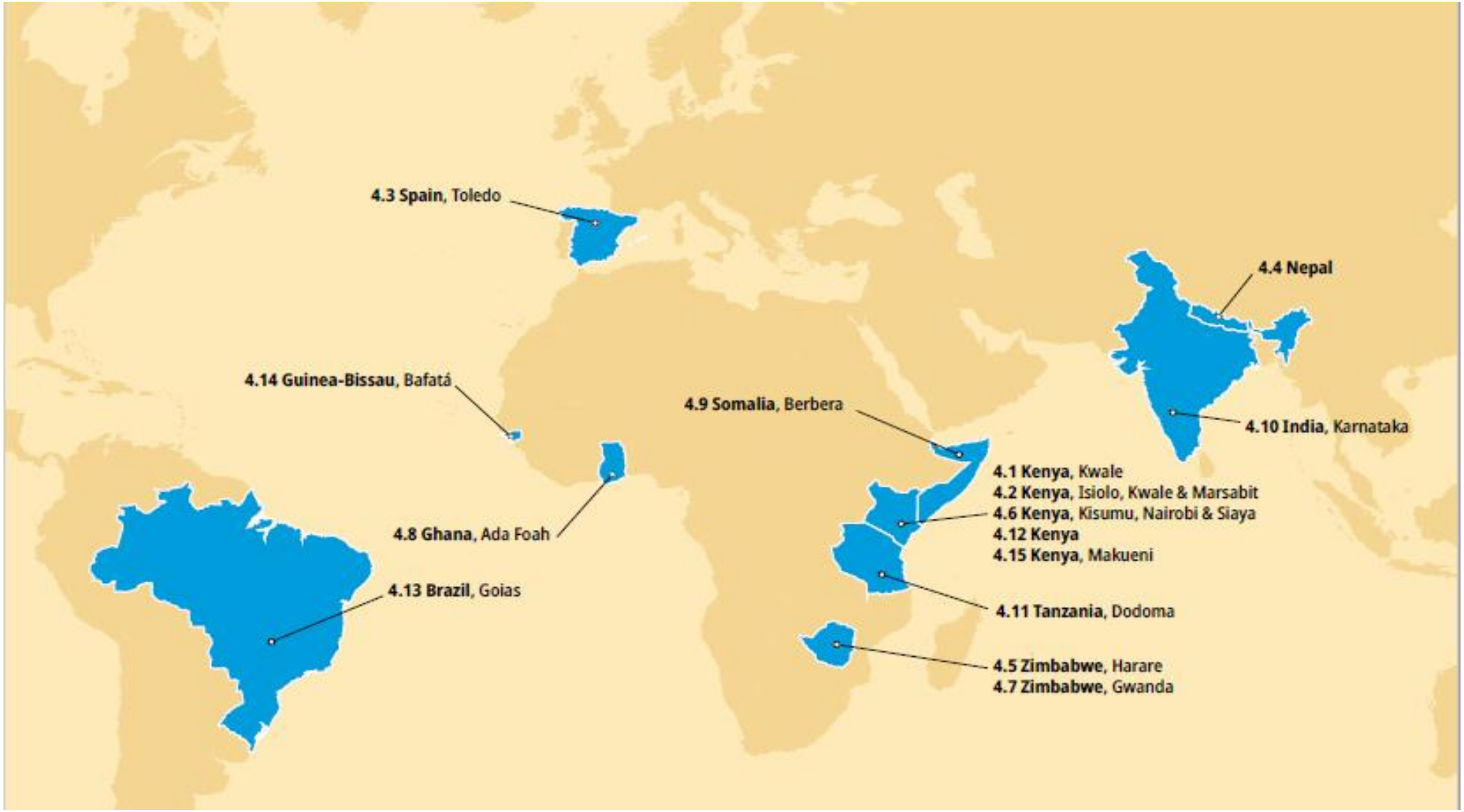

Major barriers identified

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Lack of access to essential services, including clean energy, water, etc

Lack of access to high-quality seeds & modern agricultural practices

Lack of access to agricultural and agro-processing equipment & machinery & to energy efficient appliances

Lack of access to finance

Lack of access to markets

Lack of awareness & information about DRE solutions

Lack of education/skilled labour

Lack of consideration of gender dimensions

Key recommendations (1/3)

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Challenge	Recommendation	Stakeholders
Social sustainability	• Inclusiveness and collective work approach with clear task division, accountability and ownership • Build awareness on various tariff models and their impacts on different income groups and select a tailored option reflecting the needs (avoid blueprints) • Address gender-specific issues, by providing equal opportunity for women and men to lead, participate in and benefit from the projects • Raise awareness on energy saving potentials • Raise early awareness on potential income-generating opportunities	Governments; private sector DRE operators, Civil Society organisations (CSOs); international funding partners; and local community representatives.

Key recommendations (2/3)

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Challenge	Recommendation	Stakeholders
Technical sustainability	• Data collection, assessment and sharing for efficient project optimisation • Establish effective policies and regulations • Holistic approach when implementing DRE technologies • Customer-centric system design and operations – as per regulations and standards • Capacity building to local stakeholders and beneficiaries for self-sufficient O&M and tariff structure	DRE project developers, operators and O&M technicians; government and policymakers; and local communities.

Key recommendations (3/3)

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Challenge	Recommendation	Stakeholders
Financial & institutional sustainability	• Build awareness on the advantages and disadvantages of various operation and execution (O&E) models and select the most suitable solution (avoid blueprints) • Innovative financing and financial instruments for implementation and replication of DRE technologies in agriculture • Efficient appliances ensuring both quality and affordability • Build management and financial capacities of the future operator	Government; international funding partner; CSOs; and private sector.
Environmental sustainability	• Raising awareness and the adoption of modern agricultural practices to catalyse demand for DRE technologies to boost agricultural productivity	Government; international funding partner; CSOs; private sector; and local communities.

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